

Flight, May 28, 1910.

FLIGHT

First Aero Weekly in the World.

A Journal devoted to the Interests, Practice, and Progress of Aerial Locomotion and Transport.

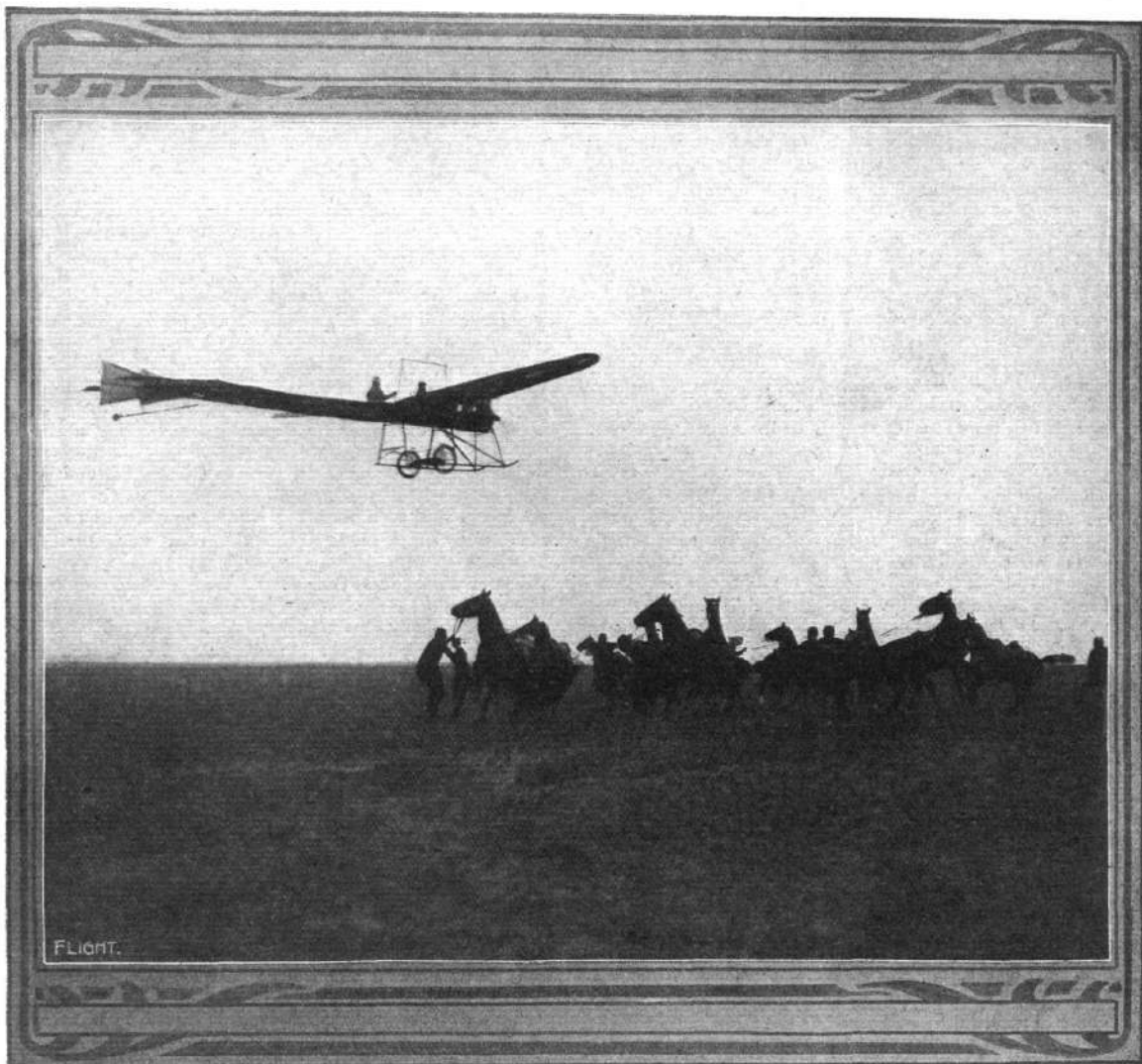
OFFICIAL ORGAN OF THE ROYAL AERO CLUB OF THE UNITED KINGDOM.

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FLIGHT.

A breezy "snap" at dusk of Wagner on the large Hanriot monoplane, "No. 4," during one of his long flights on the Champagne Aerodrome. The effect of the fleet aeroplane, as seen, upon the military horses, was somewhat disconcerting to the riders.

THE STAIRWAY OF PROGRESS.

DURING the past week we have seen two happenings which may rightly be termed stepping-stones of the progress that the science of flight has achieved, and is even now in process of solidifying still further. These two events are, of course, the second conquest of the Channel by M. Jacques de Lesseps, and Mr. Grahame-White's neat little "impromptu" flight from Brooklands to the Woking Police Court. It is, perhaps, true, that as flights pure and simple, there is nothing exactly epoch-making in either; but there is rather more behind both than a mere matter of distance traversed in the air. M. de Lesseps' cross-Channel flight has not attracted a great amount of public excitement, for the plain and simple reason that crossing the Channel by aeroplane has been reduced to the level of the commonplace by reason of the fact that he has only achieved something which another has done before him, and which, therefore, lacks the element of novelty which is so essential to popular success in anything which does not appeal directly to the immediate personal comfort or convenience of the man in the street. This vaguely termed individual in the mass cannot enthuse in any detail about a thing he does not fully understand, and flight on the heavier-than-air machine is one of those matters which is as yet only of academic interest to him, and concerning the future of which he is still only half convinced. The crossing of the Channel by Blériot, and Paulhan's London to Manchester flight, were sensational nine-days' wonders that made enormous impressions at the time, but the public is chiefly reminded that they ever took place—and of their lasting significance—just during the few brief hours when other similar performances happen subsequently to be brought home to their very doors, quickly to be dismissed once more, as with this flight of de Lesseps, with hardly a second thought.

It is this utter lack of serious popular interest in what is, after all, in the light of our present knowledge and the stage of development which flight has reached, quite a remarkable performance, which gives point to what we wrote last week on the subject of the new £10,000 prize offered by the *Daily Mail*. If flight is to develop as rapidly as possible and along the direct lines its devotees would wish, all that can be done must be done to stimulate a sustained public interest in it. It is perfectly true that there is a good deal of interest taken in the subject now, but it is of too spasmodic a nature to tend to the lasting good of the movement.

The trouble to be faced is, that flight is like nothing else that has gone before—it is not even analogous to motoring in its earlier stages, and is certainly not on a par with the railway development of the early nineteenth century. Both the latter were pursuits which our friend the man in the street could understand and appreciate from the first—whether he was favourably disposed towards them or adopted a hostile attitude is a detail—because he had for years been accustomed to the idea of vehicles moving along the surface of the earth by mechanical power, and the motor car as well as the railway train were things which were merely developments of a familiar object. But with flight it is different, even although we who understand its why and wherefore have come to regard it as being just as natural a development of the motor vehicle as the latter was of its predecessors in mechanical traction. The general public, out of its want of technical instinct, regards it as being something

very wonderful but entirely outside its ken and therefore to be taken more as a show than a serious proposition.

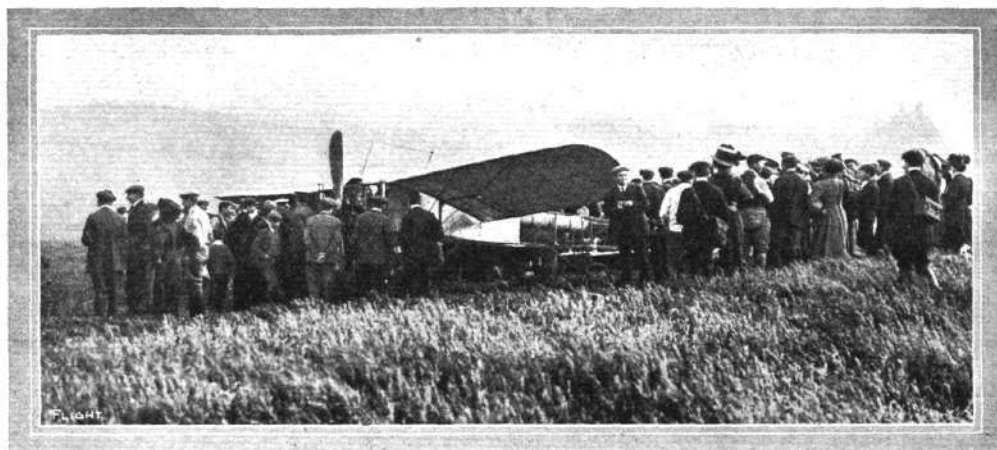
The reconquest of the Channel, then, has passed without much interest being manifested, even though it is a notable achievement in itself; while Mr. White's feat, involving as it did a journey of a very few miles, is apt to be regarded by the public more in the light of a joke played upon the magistrates than as anything else, and the needful touch of, shall we say, burlesque was supplied by the invitation extended by one of the magistrates to Mr. White, whom he had just had a hand in fining, to accompany him home to tea. Even the staid and stolid British public dearly loves its joke, and here was one after its own heart. A man in the popular eye is summoned for exceeding the speed limit in a car, he flies to the court in an aeroplane through a medium over which the police have no control, is duly fined, and goes off to tea with one of his judges, after which he calmly flies home again. Undoubtedly it has its humorous side, but in the humour of the thing the true significance of the incident is likely to be obscured. That significance, as we see it, lies in the fact that this flight of Mr. White's marks the commencement of the era of the aeroplane as a ready and practical method of conveyance. It happens that Mr. White is summoned to appear at a particular place on a particular day; and on that day, and quite as a matter of course, he gets on board his aeroplane, flies to the court, and, his case heard and disposed of, he flies home again. There is no special preparation, no waiting for certain conditions of wind and weather—everything is taken as it happens to be, and the journey is accomplished with the same ease and certainty as if any other method of locomotion had been used. But still the public is not fully influenced by it—it sees the joke, has its laugh, and forgets all about it.

Still with this absolute necessity for creating a sustained interest in flight in mind, let us refer for a moment to a suggestion that was made by Mr. Griffith Brewer in last Monday's *Daily Mail*. Briefly, he urged that a portion of the further big prize now about to be offered by that journal should be given to the first British aviator who is launched from a British vessel, and who, after a flight to a distance of five miles, returns to the vessel and descends safely on her deck. This is a very excellent suggestion in its way, and would doubtless prove of the greatest value in directing the attention of the Naval authorities to the possibilities of the aeroplane as a practical auxiliary to ships of war. But in its wider aspects it seems to us to be open to the same criticism to which we have drawn attention above, which is that it does not provide for the sustained public interest, nor afford the widely-witnessed spectacle which we consider so advisable in a case of this kind. Everyone will hope to see Mr. Brewer's idea taken up, and a prize set apart for it, and none more than readers of *FLIGHT*, whose interest in the application of aeroplanes to naval warfare was so fully aroused by him a short time ago. Mr. Brewer holds that it would be comparatively easy to board a vessel's deck, especially while under way and head to wind, and that the launching from a vessel would be an ideal means of commencing a flight. But this is essentially a type of test that ought to be made by the Admiralty, and that only needs a word of encouragement from them to bring plenty of flyers and flying men to the fore to demonstrate what they can perform.

THE CHANNEL AGAIN CROSSED.

By an oversight when M. Blériot entered for the *Daily Mail* prize and flew across the Channel on July 25th last year, he failed to make formal entry for the Ruinat prize of £500, and so left the way open for his feat to be repeated. This was successfully done, as our readers already know, on Saturday last, when M. Jacques de Lesseps, the youngest son of the famous engineer of the Suez Canal, flew from Les Baraques to a large meadow some distance

follow the aviator, but owing to the thick fog, each sighted the other but once for a brief moment in mid-Channel. The start at Les Baraques was made in the presence of Vicomte Andre de Bremont, the proprietor of Messrs. Ruinat; Mr. F. E. Croft, and Mr. J. Dunlop Watson, their English representatives; M. Fournier, representing the Aero Club de France; and Mr. H. E. Perrin, the Royal Aero Club. Before leaving the coast of France M. de Lesseps



M. 'JACQUES DE LESSEPS' CHANNEL FLIGHT.—His Blériot machine immediately after landing near Dover.

inland from the South Foreland Lighthouse, and thus secured the prize, as well as the £100 cup offered by the *Daily Mail* for the second aviator to cross the Channel. The time taken was 37 minutes, only a little better than M. Blériot's time. His machine, "Le Scarabée," was similar to the one used by M. Blériot, except that it was fitted with a Gnome motor and a "Progressive" propeller made by Passerat and Radiguet. The wings were surfaced with Continental fabric. Arrangements had been made for the French destroyer "Escopette," the same which accompanied Blériot, to

attained a height of about 800 ft., while on arriving at the English coast his altitude was considerably over 1,000 ft. The watchers on the cliffs at Dover had almost given up all hope of seeing the flight, in view of the weather, when the coastguard officer, who first saw Blériot when he made his successful crossing, announced that he could hear the motor. A few minutes after the machine, flying at a great height, emerged from the fog, heading for the Langdon Battery, further along the cliffs than Northfall Meadow, where Blériot landed. The crowd followed as quickly as they could, and



M. Jacques de Lesseps (without hat) standing by his Blériot monoplane, just after landing near Dover, at the finish of his cross-Channel flight.



THE SECOND CROSS-CHANNEL FLIGHT.—M. Jacques de Lesseps, on his Blériot, passing over the cliffs at Dover on Saturday last. A good specimen of a "composite" photograph.

it eventually transpired that the descent was accomplished after a long gliding descent of over two miles in a meadow belonging to Wanstone Court Farm, about three miles east of Dover and about a mile inland. There M. de Lesseps was welcomed by Mr. R. Clayson, of St. Margarets, who happened to be in the field, while the ladies of the farm provided the aviator with refreshment. Among the first to congratulate the young aviator was the Hon. C. S. Rolls, who is waiting for a favourable opportunity to fly from Dover to Calais, and had himself entered for the Ruinart prize. In addition there were several officials of the British

and French Aero Clubs, and Mr. Norbet Chereau, M. Blériot's manager for the United Kingdom. The official observers for the Royal Aero Club at Dover were the Hon. C. S. Rolls and Mr. Chereau. M. de Lesseps wanted to fly back again almost at once, but was dissuaded by Mr. Chereau, as the weather conditions were rapidly getting worse. Prospects of improvement being small, the aviator eventually decided to abandon his intention of returning by way of the air to France. He ultimately boarded the French destroyer which crossed with him for his flight and returned to France, his machine following in due course.

THE HON. C. S. ROLLS AND FLYING THE CHANNEL.

ALTHOUGH the Ruinart prize for a cross-Channel flight has been won and lost, the Hon. C. S. Rolls seeks to be the first Britisher to cross the silver streak separating England from France. Everyone will wish him success during this week-end, when he hopes to be able to carry out his intentions. Having entered for

the Ruinart prize, Mr. Rolls had his French-built Wright machine taken to Dover, where it has been fitted together in a shed near the Duke of York's Military School, in readiness for a favourable opportunity. Mr. Rolls hopes to cross the Channel and return to his starting point without alighting on French soil.

More Pilote-Aviateurs.

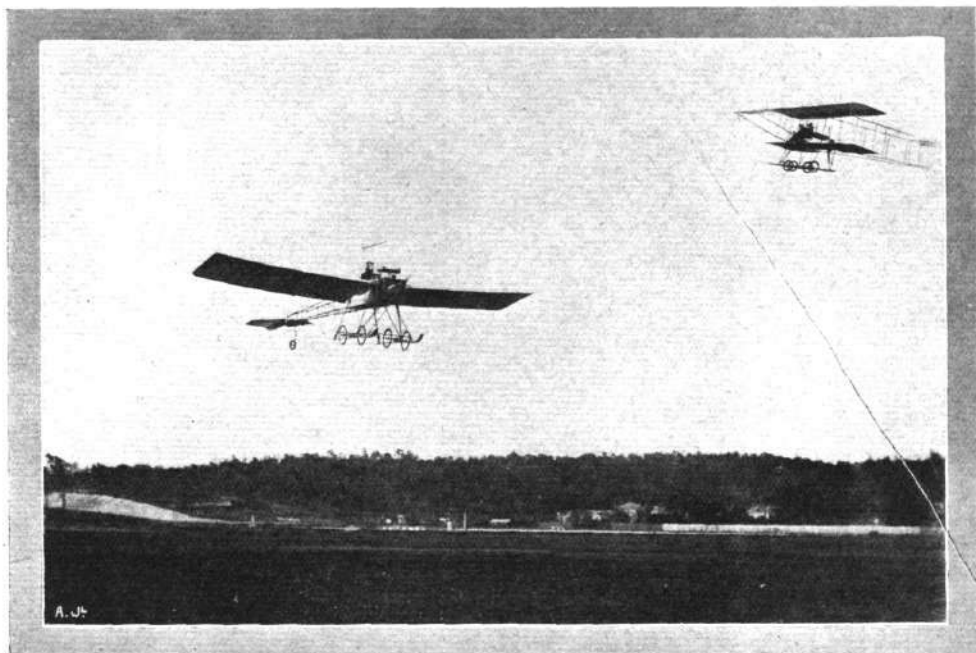
At every meeting of the Committee of the Aero Club of France a large number of applications for *pilote-aviateur* certificates are always dealt with. At the last meeting certificates were granted to Capt. Dickson, Messrs. MacArdle, Graham-Gilmour, Baron Carl de Cederstrom, Capt. Felix Marie, M.M. Henri Weiss, Mignot, Didier, R. Martinet, M. Tetard, Ladougue, R. Jourdain, G. Vinet, H. G. Laignier, E. Farnier, and Jules Bessonneau, making a total of no less than 86 pilot certificates granted by the club to date.



The Deutsche French National Prize.

ACCEPTING the proposition of the donor, the Aero Club of France have decided that the prize for French-built machines recently offered by M. Deutsche de la Meurthe shall be awarded to the builder of the first aeroplane which, between September 1st and October 31st next, flies between Paris and Orleans, keeping at a height of 300 metres for a certain part of the distance. Issy-les-Moulineaux has been selected as the starting place, while the military camp at Orleans will be the stopping place. The complete regulations are now being drawn up.

FLYING AT BROOKLANDS.



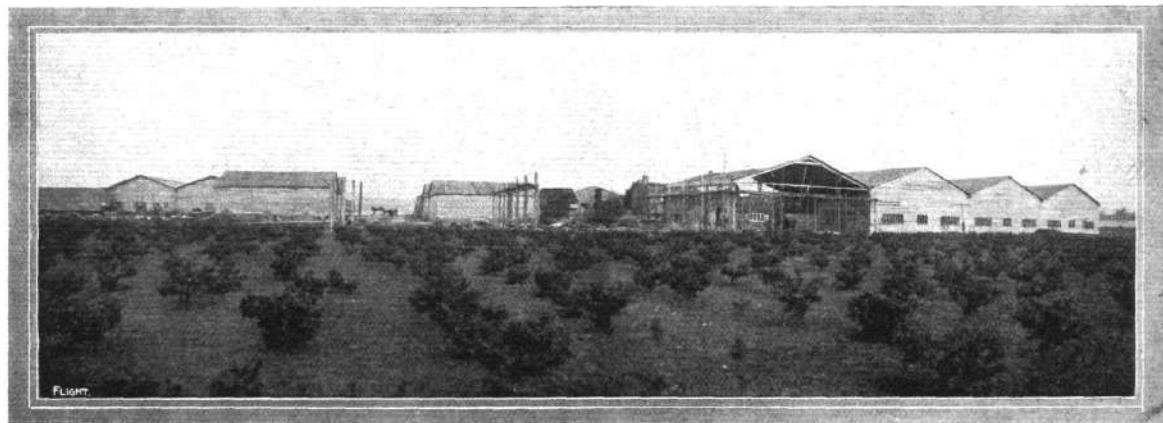
Flying at Brooklands on Wednesday of last week when at one time there were no less than six machines in the air together.—Our photograph shows in full flight the Hon. Alan Boyle on his Avis monoplane (on the left) and Mr. Claude Grahame-White, with a passenger, on his Henry Farman biplane.

SPLendid progress has been made during the past few days by the Hon. Alan Boyle, on his British-built Avis monoplane. On the 17th inst., after new wings had been fitted to his machine, he flew for a distance of about 5 miles at a height of 40 ft., and landed quite safely, whilst on the following day he made several short circular trips of three-quarters of a mile each. On Saturday last Mr. Boyle twice circled the ground at a height of 50 ft., then rose to a height of between 150 and 200 ft., and again made two circuits of the ground.

Mr. Claude Grahame-White has also been busy on his Farman machine, and has taken up a large number of his friends for short trips on various occasions. We refer elsewhere to his cross-country trip made on Saturday last. On the 18th inst. he flew for 6 or 7 miles carrying two passengers.

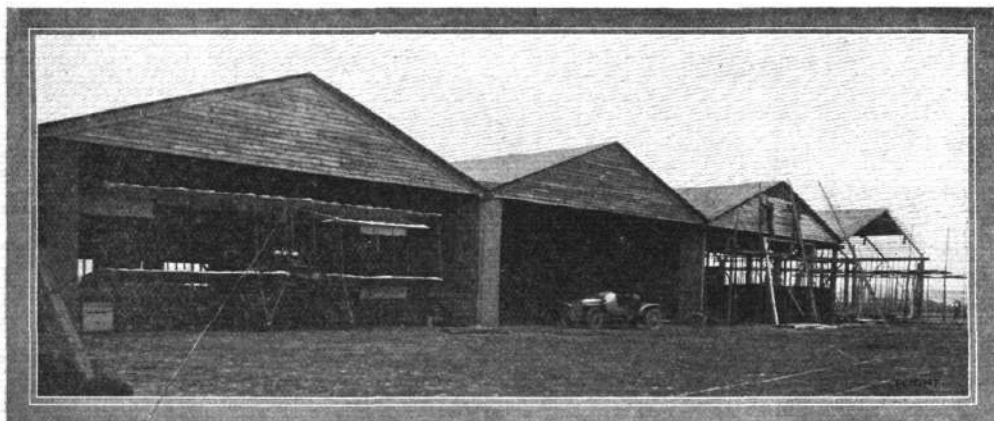
Mr. Charles Lane has also been getting good results with his monoplane, and he has been out on several days, making short flights.

Mr. George A. Barnes, the well-known racing motor cyclist, has now joined the staff of Messrs. Humber, Ltd., and he, with



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BROOKLANDS FLIGHT COLONY.—At Brooklands quite a town is growing up, almost with the rapidity of new settlements in outlying American districts, for the accommodation of flyers who are locating themselves on the aviation grounds which are being improved every week under the master hand of Major Lindsay Lloyd. Our view above gives some idea of this little city with its regular "streets." The shrubs in the foreground are gooseberry bushes.



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A GROWING "STREET" AT BROOKLANDS AVIATION GROUNDS.—The machine in the shed is Mr. Claude Grahame-White's Henry Farman which he used on the Manchester flight. The next shed is the home of the first machine built by Sir George White's company—the British and Colonial Aeroplane Co., Ltd., of Bristol.

Captain Lovelace, has been conducting experiments with a couple of Humber monoplanes. Mr. Neale has also been trying his new monoplane; while Mr. Petre, having got the monoplane which was seen in skeleton form at Olympia completed, has obtained very good

results with it in some initial tests. On Monday evening Sir Maxwell Monson had a smash while experimenting with the Gregoire-Gyp monoplane. At one time during the afternoon of the 18th inst. there were six flying machines in the air at one time.

BRITISH NOTES OF THE WEEK.

Wolverhampton Flying Meeting.

It is announced that a considerable number of British flyers have definitely arranged to take part in the Wolverhampton meeting next month. Among the names mentioned are the Hon. C. S. Rolls, Capt. Dickson, the Hon. Maurice Egerton, Mr. Cecil Grace, Mr. Radley, Mr. Lionel Mander, Mr. S. F. Cody, Mr. Foley, Mr. J. Holder, and Mr. Bradshaw, the last-named using the locally-built Star monoplane. The work of organising the meeting is now being actively undertaken by a number of sub-committees, and the guarantee fund is steadily mounting up, although the full sum of £5,000 has not yet been quite completed. It has been decided to offer a prize for the greatest aggregate distance flown during the meeting.

Doncaster Flying Meeting.

At a meeting of the Doncaster Corporation last week, it was decided to grant the use of the Doncaster racecourse for a flying meeting from July 17th to 24th. The Corporation are to receive £1,000 in instalments for the use of the common, but take no financial responsibility.

Attending Police Court by Aeroplane.

ALTHOUGH in comparison with his attempts to fly to Manchester, Mr. Claude Grahame-White's exploit on Saturday last was but a minor affair, yet it clearly demonstrated the utility of the aeroplane for travelling from point to point direct. Summoned to appear at Woking Petty Sessions for exceeding the speed limit, he flew from Brooklands to Woking on his Henry Farman biplane the same as he used in the London to Manchester attempts. He came down in a meadow adjoining Westfield Common, about two miles beyond the town, having covered the six miles in eight minutes. After being fined £5 and costs for driving at a speed alleged by the police to be 40 miles an hour, Mr. White was invited by one of the magistrates to tea. About half-past seven in the evening Mr. Grahame-White flew back again to Brooklands, flying along the railway line between Woking and Weybridge.

New Gratzé Monoplane.

FOLLOWING somewhat the lines of his old machine, Mr. Eugene V. Gratzé has now completed his new monoplane, and is ready for trial at Canewdon, near Southend-on-Sea, it being formerly christened "Daisy" last week by breaking a bottle of wine over the

propeller. The steering is performed by means of the propeller, while the elevating is regulated by an overhead plane placed slightly forward of the main plane. Lateral stability is effected by means of two flaps at the ends of the main planes. Mr. Gratzé has secured a good flying ground at Canewdon, which runs along the Crouch for two miles, and has a superficial area of about 200 acres, all perfectly flat. He will be pleased to arrange for anyone wishing to share the ground.

The Blackburn Monoplane.

WHILE testing his monoplane on the Marske sands on May 24th, Mr. R. Blackburn, of Leeds, met with a mishap. He was running the machine along the beach when, through skidding into a hole, the tyre of one of the wheels came off. Mr. Blackburn at once cut off the ignition, and as a result of the sudden stoppage, he was thrown from his seat. Fortunately he escaped injury, but the left wing of the monoplane was slightly damaged.

A New Coventry Aeroplane.

A SUCCESSFUL trial was made on the 17th inst. at Hampton with an aeroplane which has been designed and built by Mr. A. Weaver, of Coventry. It is purely an experimental machine, and is known as an ornithoptone. Four tests were made, and at the third the machine flew steadily for a quarter of a mile. The machine has been designed largely with the view of being light and portable, and so aluminium and bamboo enter largely into the construction, while the propeller is also of aluminium. The main planes have a spread of about 45 ft., and the engine at present fitted is of 20-h.p., but this will be replaced by a more powerful one shortly.

Capt. Dawes at Huntingdon.

WHILE Capt. Dawes was practising with his monoplane at Huntingdon on the 18th inst., the engine miss-fired, and the machine landed suddenly in some swampy grass. The machine was damaged, a wing being broken and the propeller splintered, but the aviator escaped unhurt.

Mr. de Havilland Nearly Ready.

MR. G. DE HAVILLAND has now taken his new machine down to Litchfield, Hants, and hopes to be able to commence his trials with it in about a week's time.

MR. C. C. PATERSON'S BIPLANE.



General side view of Mr. C. C. Paterson's biplane just about to rise off the Freshfield sands near Liverpool.

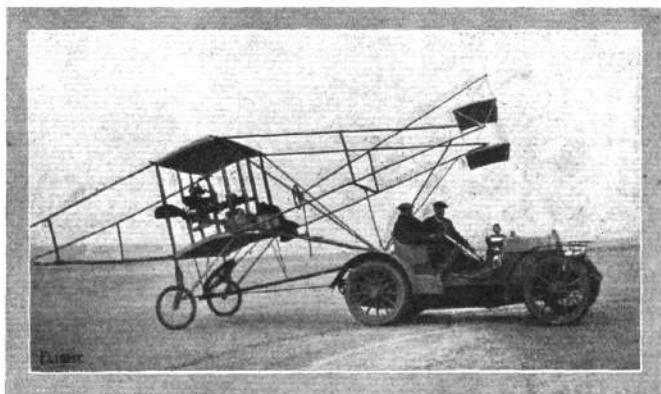
In our last issue we referred to the successful trial of a biplane built at Liverpool for Mr. C. Compton Paterson, and now by the courtesy of the owner, we are enabled to give a few photos of the machine together with some further particulars. As a result of his observations at Rheims and other flying meetings on the Continent, Mr. Paterson determined to have a machine built on the lines of the Curtiss biplane.

The work of construction was undertaken by the Liverpool Motor House, of which Mr. Paterson is a director, and was completed on the 13th inst. Very early the following morning the machine was towed, as shown in one of our photographs, by road to the seashore at Freshfield, near Southport. Soon after 5 a.m. the biplane was ready, and Mr. Paterson, who had never been on a flying machine before, took his seat at the wheel. As the machine had not been tested in any way, Mr. Paterson first made a trial run along the beach at a speed of between 30 and 40 miles an hour, which was easily accomplished in spite of a strong easterly breeze blowing from the land, which caused the machine to roll a good deal. During the next run the machine rose to a height of about 10 ft., and was off the ground for 100 yards. In consequence of the cross

wind, Mr. Paterson then decided to fly up the shore from the edge of the sea landwards, and in this way he covered half a mile at an elevation of 20 ft. In a third flight with the wind behind, the machine rose for a distance of 200 yards, and then came down rather heavily, buckling one of the wheels. In consequence of this and the incoming tide, it was decided to suspend operations and to take the machine back to Liverpool in order to embody one or two minor improvements suggested by the experiments.

From the photographs it will be seen that the machine follows on general lines the design of the Curtiss biplane, with its biplane elevator, the crossed tail, and the ailerons between the extremities of the main planes. At present the machine is fitted with a 25-30-h.p. 3-cyl. Anzani, but it is proposed to substitute for this very shortly a more powerful British engine, thus making the biplane entirely British.

The main framework is of bamboo, while the hollow stays are made of silver spruce and ash. A feature of the machine is its lightness, and with the tank full, the weight is only a little over 600 lbs. The tank holds six gallons of petrol, sufficient to last for a journey of 90 miles. The main planes are made in three sections, so that they may be taken apart, thus facilitating the work of transporting the machine. So successful has the machine proved that arrangements are being made for turning out replicas in large quantities, and at a comparatively low price.



Method of conveying the Paterson biplane from place to place.—It will be noted that the extensions on both sides of the main planes are detached for this purpose.



Sommer Flies from Douzy to Verdun.

DETERMINED to better his flight from Douzy to Charleville and back, which was recorded in our last issue, M. Roger Sommer, on the 20th inst., took a trip from his headquarters at Douzy to Verdun and back, a distance of 160 kiloms., the net time for the double journey being 2 hrs. 20 mins. Starting from Douzy, the route taken was over Mouzon, Inor, Stenay, Dun, Vilosnes, and Charny, thus following the course of the River Meuse. A

descent was made at Verdun, where the officers attending the manoeuvres in the vicinity welcomed the aviator, and he spent about 50 mins. chatting with them. He then started off on the return journey, and regained his shed at Douzy without incident. On the outward journey, a thick fog obscured the country at Stenay, and M. Sommer feared he would have to come down to ask his way. Fortunately, however, he persevered, and landed safely at his pre-arranged destination.



International Laws for Aviators.

ON the 18th the International Conference on Aerial Navigation met at the French Ministry for Foreign Affairs, when the various delegates of nineteen countries were welcomed by M. Millerand, the Minister of Public Works. M. Louis Renault, the great French lawyer, was elected president, while four vice-presidents were

appointed, their names being Admiral Sir Douglas Gamble (Great Britain), Dr. Kriege (Germany), Signor Pompeo Bodrero (Italy), and M. Lardy (Switzerland). Four sub-committees were appointed, and they will deal respectively with questions of law, administration, customs, and circulation. Another international conference on aerial law has been arranged to be held at Verona from May 31st to June 2nd.

EIGHTY-SIX CERTIFIED FLIGHT PILOTS.

BELOW we reproduce in full the imposing list of holders of "pilote-aviateur" certificates issued by the Aero Club of France up to the present time, whilst there must be close upon as many again about ready to pass the requisite tests to secure the coveted certificate. It will be noticed that the list includes no less than 86 names, among them being M. Delagrè, Capt. Ferber, and M. Le Blon, who have since been numbered amongst the martyrs in the great cause:—

1. Louis Blériot (Blériot)
2. Glen Curtiss (Curtiss)
3. Leon Delagrè (Blériot)
4. Robert Esnault - Pelletier (R.E.P.)
5. Henry Farman (H. Farman)
- 5A. Capt. Ferber (Voisin)
6. Maurice Farman (M. Farman)
7. Jean Gobron (Voisin)
8. Comte Charles de Lambert (Wright)
9. Hubert Latham (Antoinette)
10. L. Paulhan (H. Farman)
11. Henry Rougier (Voisin)
12. Santos-Dumont ("Demoiselle")
13. Paul Tissandier (Wright)
14. Orville Wright (Wright)
15. Wilbur Wright (Wright)
16. Etienne Bnanu-Varilla (Voisin)
17. Alfred Leblanc (Blériot)
18. Julien Mamet (Blériot)
19. Rene Metrot (Voisin)
20. Prince Bibesco (Blériot)
21. Emile Aubrun (Blériot)
22. Jacques Balsan (Blériot)
23. Hon. Charles S. Rolls (Wright)
24. Mortimer Singer (H. Farman)
25. Leon Molon (Blériot)
26. Henri Bregt (Voisin)
27. Jacques de Lesseps (Blériot)
28. Ernest Zens (Blériot)
29. Roger Sommer (Sommer)
30. C. Grahame-White (H. Farman)
31. Michel Efinoff (H. Farman)
32. Geo. Chavez (H. Farman)
33. Lieut. Camerman (H. Farman)
34. De Riemsdyk (Curtiss)
35. Edmond Morelle (H. Farman)
36. Mme. Raymonde de La Roche (Voisin)
37. Van den Born (H. Farman)
38. Hubert Le Blon (Blériot)
39. Rene Gasnier (Wright)
40. J. T. Moore-Brabazon (Voisin)
41. Maurice Herbster (H. Farman)
42. Fernand Deletang (Blériot)
43. Andre Crochon (H. Farman)
44. Capt. Burgeat (Antoinette)
45. Lieut. Bellenger (H. Farman)
46. G. P. Kuller (Antoinette)
47. Emile Dubonnet (Tellier)
48. Alfred Frey (H. Farman)
49. Marcel Baratoux (Wright)
50. Nicolas Popoff (Wright)
51. Vincent Wiesenbach (H. Farman)
52. Louis Breguet (Breguet)
53. Charles Louis Wachter (Antoinette)
54. Leon Morane (Blériot)
55. Georges Legagneux (Sommer)
56. Rene Toussin (Blériot)
57. Elie Mollien (Blériot)
58. Walter de Mumm (Antoinette)
59. Louis Gaubert (Wright)
60. Victor Rigal (Voisin)
61. Henri Julierot (H. Farman)
62. Leon Cheuret (H. Farman)
63. Lieut. A. Fequant (H. Farman)
64. Rene Barrier (H. Farman)
65. Lieut. Sido (H. Farman)
66. Henri Sallenave (Blériot)
67. Bruneau de Laborie (H. Farman)
68. Lieut. Aquaviva (Blériot)
69. Comte de Montigny (Blériot)
70. Hayden Sands (Antoinette)
71. Capt. Bertram Dickson (H. Farman)
72. W. McArdle (Blériot)
73. Henri Weiss (Blériot)
74. Baron Carl de Cederstroem (Blériot)
75. Graham Gilmour (Blériot)
76. Mignot (Voisin)
77. Didier (H. Farman)
78. Capt. Marie (H. Farman)
79. Martinet (H. Farman)
80. Tetard (H. Farman)
81. Ladougue (Goupy)
82. R. Jourdain
83. N. Kinet (H. Farman)
84. H. G. Laignier
85. E. Farnier (Caudron)
86. Jules Bessonneau

THE GERMAN AERIAL FLEET.

So much activity has taken place in Germany on the construction of dirigibles, and so many airships have been constructed and proposed at one time and another in that country, that it is a little difficult to exactly estimate what does and does not exist at the present time. The following table, which has been published by our French contemporary *L'Intransigeant*, purports to be a correct statement of the present German aerial fleet, based on statistics compiled by an officer of the French Army:—

Name.	Capacity.	H.P.	Military.	Private.	Remarks.
	cub. m.				
Zeppelin (1)	11,300	80	—	—	Dismantled for the construction of Zeppelin (2).
Zeppelin (2)	10,400	170	—	—	Destroyed in a storm at Algau (Jan., 1906).
Zeppelin I (3)	12,000	170	1	—	Stationed at Metz.
Zeppelin (4)	13,000	220	—	—	Destroyed at Echterningen in Aug., 1908.
Zeppelin II (5)	15,000	230	—	—	Destroyed at Weilburg, April 25th, 1910.
Zeppelin III (6)	15,000	270	1	—	Refused by the military authorities in 1909.
Parseval I...	4,000	90	1	—	Stationed at Metz.
Parseval II	3,200	100	1	—	At Cologne.
Parseval III	6,700	200	1	—	At Bitterfeld.
Parseval IV	3,200	200	1	—	Public service.
Parseval V	1,200	25?	1	—	Sporting dirigible.
Gross I (or M-I)	5,200	150	1	—	Stationed at Berlin Balloon School after numerous alterations.
Gross II (or M-II)	5,200	150	1	—	Cologne.
Gross III (or M-III)	6,700	300	1	—	Berlin.
Leichlingen (Rhein, Westph.)	2,900	125	—	—	Destroyed in Dec., 1909.
Clouth	1,700	—	1	—	At Cologne, given poor results.
Ersbloh	2,900	—	1	—	Not completed.
Ruthenberg	1,200	—	—	—	Destroyed in March, 1910.
Bilderbrandt	2,000?	—	1	—	Not completed.
Kiel	2,500?	—	1	—	Not completed.

This gives a total of 7 military and 7 private.

The airships under construction in Germany are as follows:—

Zeppelin IV (7)	19,000	340	1	—	Electrone metal. Intended for public service.
Zeppelin V (8)	20,000	350	1	—	
Parseval VI	6,700	—	1?	—	
Parseval VII	6,700	—	1?	—	
Parseval VIII	1,200	?	1	—	Sporting dirigible.
Parseval IX	5,000	?	1	—	Public service.
Gross IV	12,000	400	1	—	
Schutte	19,500	500	—	1	Rigid, at Mannheim.
Trives	19,000	480	—	1	Rigid, at Dantzig.
Siemens-Schuckert	15,000	500	—	1	Non-rigid, at Nounendamm.
Ruthenberg	small	500	—	1	Sporting dirigible.
Ruthenberg	small	500	—	1	
Ganes-Fabrice	small	—	—	1	

THE SMITH-DOREY VALVE.

THE accompanying illustration shows an exceptionally interesting valve, specially designed for use with aero engines by G. H. Smith and W. H. Dorey, Ltd.

It is claimed for this valve that although possessing the advantages of a nickel valve, it has not the disadvantages usually associated with the latter type of valve.

With valves made of nickel, as no doubt most of our readers know, the stems are somewhat weak and are apt to break without warning. For aeronautical work in particular this is a point of considerable importance, as it would possibly lead to serious consequences. On the other hand, the nickel valve has the one great advantage



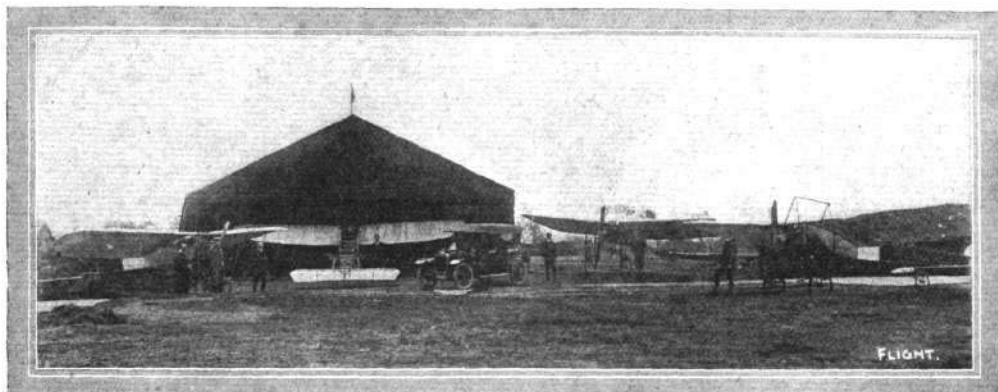
Diagrammatic sketch showing the Smith-Dorey valve in section, the shaded portion being the pure nickel seating.

that it requires very little grinding in and cleaning.

In the Smith-Dorey valve the seating portion is of pure nickel, whilst the body of the head and the stem are constructed of 3 per cent. nickel steel, thus securing great strength where it is most required. It will be seen, therefore, that by the combination the above-mentioned difficulties are overcome. The makers can supply these valves to manufacturers and others to comply with any special design.

It should be mentioned that the nickel seating is set into the valve-head by means of a special patented process, whereby a very tight joint is obtained.

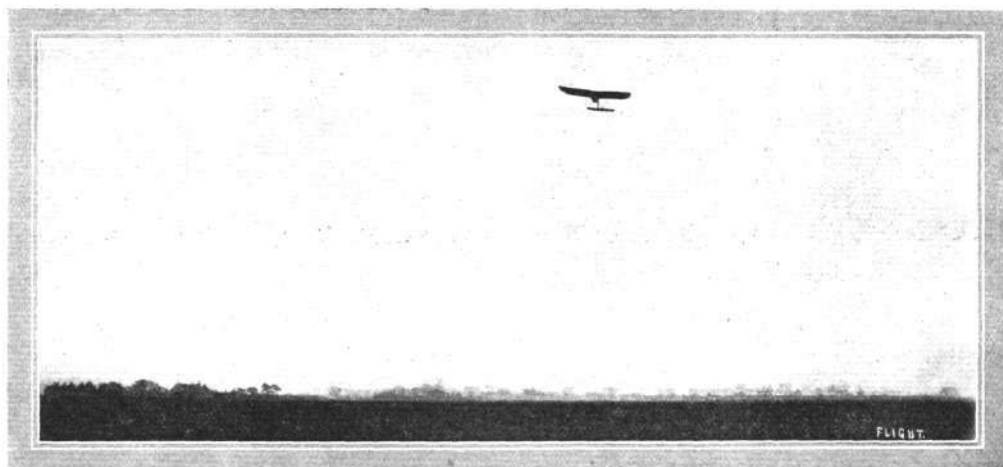
AN AVIATION SCHOOL AT BOURNEMOUTH.



MESSRS. McARDLE AND DREXEL'S NEW FOREST AVIATION SCHOOL.—The flying grounds extend to 500 acres, and already there are seven Blériots installed at the School.

THE two photographs which we reproduce herewith give some idea of the work which is being done by Mr. W. E. McArdle at the flying school he has established in conjunction with Mr. A. Drexel just by Brockenhurst Station in the New Forest. At the present time the equipment includes seven Blériot machines, three of which have been built at Bournemouth, while two biplanes are also under construction. During Whit week both Mr. McArdle

and Mr. Drexel were flying at Wallisdown, near Bournemouth. One of the snapshots shows the latter on a locally built machine passing over the flying grounds. Arrangements can be made for any aviator to rent a shed at a charge of £50 per annum with free use of ground about 500 acres in extent, with excellent surface for landing and practice. The other facilities include a large workshop with competent men to do repairs.



Mr. A. Drexel flying high on a Blériot over the McArdle and Drexel New Forest Aviation School grounds.

Flying over Berlin.

BERLINERS were treated to an unexpected sight on Monday, when Karl Frey sent a thrill through the city by flying across it in his Henry Farman biplane. Starting from the flying ground at Johannisthal at 7 p.m., he flew to the German capital, arriving over the Tiergarten, circled the Statue of Victory, passed along Unter den Linden, flew round the dome of the Kaiser's palace, and then returned to his starting point. During the little trip, which lasted 35 mins., he covered a distance of something over 27 kiloms. While flying over the Tempelhof he reached an altitude variously estimated as between 400 and 500 metres.

Herr Frey did not, however, stay to be fêted by his compatriots, as he heard that the police were likely to turn their attention to him, and in consequence he decided to keep a pressing engagement in Paris. It appears that there is a regulation in Germany against flying over inhabited areas, and it has just transpired that Mr. Latham last autumn was fined £7 10s. for his trip from the

Tempelhof field to Johannisthal, while M. Jeannin, who recently flew from Johannisthal to Glienicke, had to pay 50s. for his offence. Already steps are being taken by the German aerial societies with a view to having this law altered, as it is felt that it is likely to interfere with the development of aviation in Germany.

Flying Across Country in Austria.

WE were just able to mention in our last issue the splendid performance of Herr Illner, who, following on the record-breaking successes of Herr Etrich, himself flew on the 17th inst. on the Etrich monoplane from Wiener-Neustadt to Vienna and back. He started from the former place about 6.20 a.m., traversed the 45 kiloms. to the Austrian capital in 32 mins., and landed on the Semmering Heath. About 5.30 in the afternoon he started on the return journey, and after 42 mins. landed in front of his shed. Herr Illner flew very high, mostly at an altitude of between 300 and 400 metres.

The Royal Aero Club of the United Kingdom

OFFICIAL NOTICES TO MEMBERS

Committee Meeting.

A MEETING of the Committee was held on Tuesday, the 24th inst., when there were present:—Mr. John Dunville, in the chair, Mr. Griffith Brewer, Mr. Ernest C. Bucknall, Mr. V. Ker-Seymer, Mr. C. F. Pollock, Mr. Stanley Spooner, and Harold E. Perrin, secretary.

New Members.—The following new members were elected:—

J. B. Bainbridge.	Vivian Hewitt.
M. F. Broadwood.	Mrs. Hilda B. Hewlett.
Edgar Percival Chance.	Kennedy Jones.
Valentine W. Eyre.	Princess Ludwig Lowenstein-Wertheim.
Howard Joseph Harding.	

Aviator's Certificate.

Mr. Alec Ogilvie, having accomplished the necessary flights laid down by the Rules, has been awarded an Aviator's Certificate. The flights were made at Camber, on the 15th May, in the presence of Mr. T. P. Searight and Mr. H. R. Pigeon.

National Aviation Meetings.

The Committee, at their meeting on Tuesday last, had under consideration the applications to hold National aviation meetings during the present year, and the following dates were provisionally approved:—

Boldon Race Course, Durham (Northumberland and Durham Aero Club) ...	June 18th-22nd
Cardiff	August 24th-27th
Southend	August 17th-24th

Claude Grahame-White Testimonial Fund.

Amount previously acknowledged ..	£1,720 5 5
Scottish Aeronautical Society, per Prof. Arch. Barr, D.Sc. ..	2 2 0
Prof. Wm. Stroud, D.Sc. ..	2 2 0
Prof. J. H. Biles, L.L.D. ..	2 2 0
Sir Wm. Bilsland, Bart. ..	2 2 0
Col. John Sillars ..	2 2 0
Hugh Reid, D.L. ..	2 2 0
R. R. Speirs ..	2 2 0
Alexander Gracie, M.V.O. ..	2 2 0

Carried forward £1,720 5 5

Brought forward ..	1,720 5 5
J. R. K. Law ..	2 2 0
W. G. Burn-Murdoch ..	1 1 0
William Macnab ..	1 1 0
Frank S. Barnwell ..	1 1 0
Laurence Bell ..	0 5 0
G. Gladwin-Errington ..	2 2 0
Mrs. Horace Pym ..	2 2 0
Jack Dare ..	1 1 0

Carried forward £1,747 16 5

⊗ ⊗ ⊗ ⊗

PROGRESS OF FLIGHT ABOUT THE COUNTRY.

(NOTE.—Addresses, temporary or permanent, follow in each case the names of the clubs, where communications of our readers can be addressed direct to the Secretary. We would ask Club Secretaries in future to see that the notes regarding their Clubs reach the Editor of FLIGHT, 44, St. Martin's Lane, London, W.C., by first post Tuesday at latest.)

Arundel House School Ae.C. (15, ARLINGTON ROAD, SURBITON).

THE first of the man-carrying gliders designed and constructed by members of the club has recently been completed, and several

These fixtures are subject to satisfactory details being supplied to the Royal Aero Club.

Ruinart Prize.

M. Jacques de Lesseps made a successful flight across the Channel on Saturday last, the 21st inst., thereby winning the prize of £500 offered by Messrs. Ruinart Pere et Fils. M. Fournier, representing the Aero Club de France, and Mr. H. E. Perrin, the Royal Aero Club, were the officials on the French coast, and the Hon. C. S. Rolls and Mr. N. Chereau acted in a similar capacity at Dover.

Baron de Forest Prize.

Mr. Claude Grahame-White has sent in his entry to the Royal Aero Club for the prize of £4,000 offered by Baron de Forest.

Bournemouth Aviation Meeting.

Hotel Accommodation.—Owing to the large number of applications for accommodation at the Hotel Burlington, only a few rooms are now available, and members desirous of securing same should make early application to the Secretary of the Club.

Competitors.—Intending competitors are reminded that it is a condition that all entrants shall hold an aviator's certificate issued by the Royal Aero Club or other club forming part of the Federation Aeronautique Internationale.

HAROLD E. PERRIN,

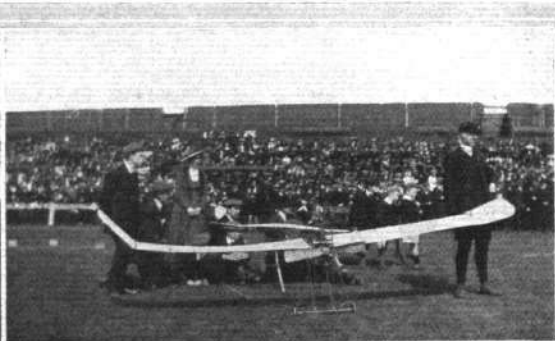
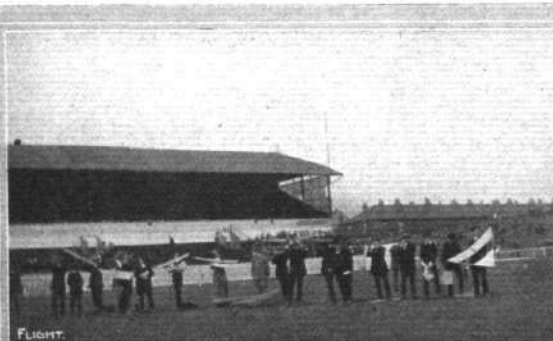
Secretary.

166, Piccadilly.

Donations received up to Tuesday, May 24th, 1910.

Brought forward ..	1,747 16 5
Manchester Ae.C., per Mrs. Fred Hertz ..	1 1 0
Walter F. Pease ..	1 1 0
Coventry Ae. Soc., per Eric W. Walford ..	0 10 6
All at Ivy Lane ..	0 5 0
E. Bennett ..	0 5 0
Howard Mason ..	0 3 0
Lieut. R. G. Fane, R.N. ..	0 2 6
V. H. Odom ..	0 2 0

£1,751 6 5



Photos by C. F. W. Cudworth.

SHEFFIELD AERO CLUB'S MODEL COMPETITION.—On the left, start of the model machines at Bramall Lane on Whit Monday during the Sheffield Charity Tournament. On the right, one of Mr. A. W. Whitworth's (Sheffield Aero Club) motor-driven machines.

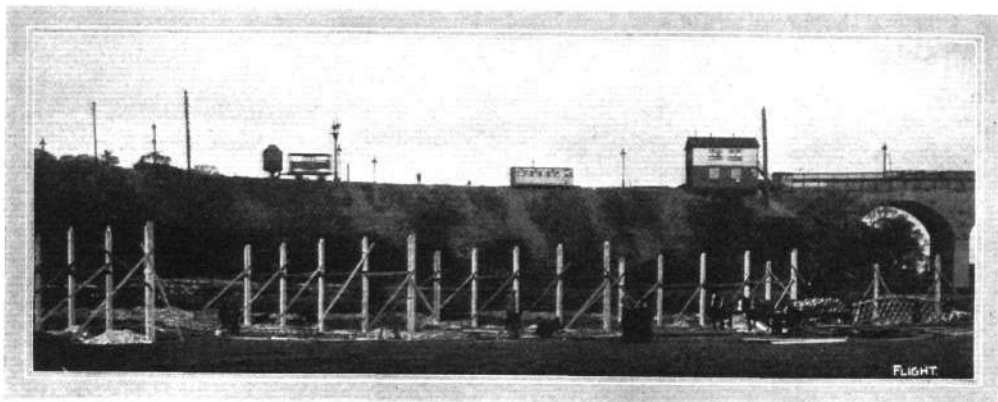


Photo by J. N. Cadwalender.

Preparations for the Midland Aero Club's Meeting at Dunstall Park, Wolverhampton. Some of the aeroplane sheds in course of erection.

glider several original ideas with regard to control and steering. Its dimensions are: span, 18 ft.; chord, $4\frac{1}{2}$ ft.; height, $4\frac{1}{2}$ ft.; fore and aft, 14 ft.; tail, 6 ft. by 2 ft.; area, 165 sq. ft.; aerocurve, 1 in 3; skid momentum twisting tail steering. It is hoped later in the season to give a series of public demonstrations of the capabilities of the Ridley glider, with a view to encouraging the formation of similar clubs in other parts of the country. A second glider, the work of Owen Wilson-Jones, of Surbiton, will shortly take the air on a trial trip, and a model aeroplane contest on a large scale is to be held in June.

Hampshire Aero Club (48, PALMERSTON ROAD, SOUTHSEA).

INTENDING competitors in model contests at the Aero Camp, Fort Grange, on June 25th, are hereby informed that if convenient to them, they are at liberty at any time to leave their models locked up at the Aero Camp, and will thus be enabled to make preliminary flights on the ground without the risk and trouble of carrying models there and back. Competitors are also informed that the date of notice of entry for the competition is extended from May 31st to June 20th. For further particulars address Capt. F. W. Marriott, the Hon. Sec., at 82, Palmerston Road, Southsea.



Photo by J. N. Cadwalender.

WOLVERHAMPTON AVIATION MEETING.—A general view of a corner of the Dunstall Park Racecourse on which the Midland Aero Club will hold their flying meeting from June 25th to July 1st. From this a good idea can be gleaned as to the suitability of the course for the purpose of flying contests.

Sheffield and District Aero Club (36, COLVER ROAD).

THE club's model aeroplane competition, in connection with the Sheffield Charity Tournament, was successfully held on Whit Monday before an attendance of 15,000 persons. The entries greatly exceeded expectations, numbering 44. The following were the classes and the respective winners:—

Class 1.—Open to members professionally engaged in construction of model aeroplanes, and for purchased models. 1st, Mr. E. Richardson, Finbat "Farman" biplane; 2nd, Mr. Knowles, Finbat monoplane.

Class 2.—Open to amateur constructed models. 1st, Mr.

Knowles, biplane; 2nd, Mr. Hattersley, biplane; 3rd, Mr. Stead, monoplane.

Class 3.—Open to amateurs and professionals. 1st, Mr. E. Richardson, Finbat monoplane; 2nd, Mr. Hattersley, Finbat monoplane.

Messrs. Kavanagh (chairman) and Swindell acted as judges, and the longest flight of the day proved to be 300 ft. by Mr. E. Richardson in Class 3. The amateur models were somewhat disappointing, and appeared to suffer from over elaboration, being more suitable for exhibition purposes than actual flying. Great interest was taken in Mr. Whitworth's one-third size monoplane, but unfortunately the two-stroke engine could not be induced to run satisfactorily.

CONTINENTAL AVIATION MEETINGS.

Berlin Flying Meeting, Tabulated Results.

Prize for Total Cumulative Time.

		h.	m.	s.
1. Jeannin (H. Farman)	...	5	13	35
2. Engelhardt (Wright)	...	2	42	39

Passenger Prize.

1. Engelhardt (Wright)	...	0	24	39
2. Frey (Sommer)	...	0	23	28

Prize for Longest Flight without Landing.

1. Jeannin (H. Farman)	...	2	11	29
2. Engelhardt (Wright)	...	1	37	18
3. Frey (Sommer)	...	0	50	23

Prize for Flight in Smallest Circle.

1. Jeannin (H. Farman)	...	115 met. diam.
2. Frey (Sommer)	...	166 "

Prize for Gliding Flight.

1. De Caters (Voisin)	...	196m. 27c.
2. Jeannin (H. Farman)	...	174m. 45c.

Landing Prize.

1. De Caters (Voisin)	...	32'32m. from the mark.
2. Jeannin (H. Farman)	...	53'59m. "

Serpentine Prize.

1. De Caters (Voisin); 2. Jeannin (H. Farman).

Daily "Diligence" Prizes.

May 10th.—1. Engelhardt (Wright).

May 11th.—Rain prevented flying.

May 12th.—1. Engelhardt (Wright); 2. Jeannin (H. Farman).

May 13th.—1. Jeannin (H. Farman).

May 14th.—1. De Caters (Voisin); 2. Gorrissen (H. Farman); 3. Jeannin (H. Farman).

May 15th.—1. Swendsen (Wright); 2. Thilen (H. Farman).

May 16th.—1. De Caters (Voisin); 2. Frey (Sommer).

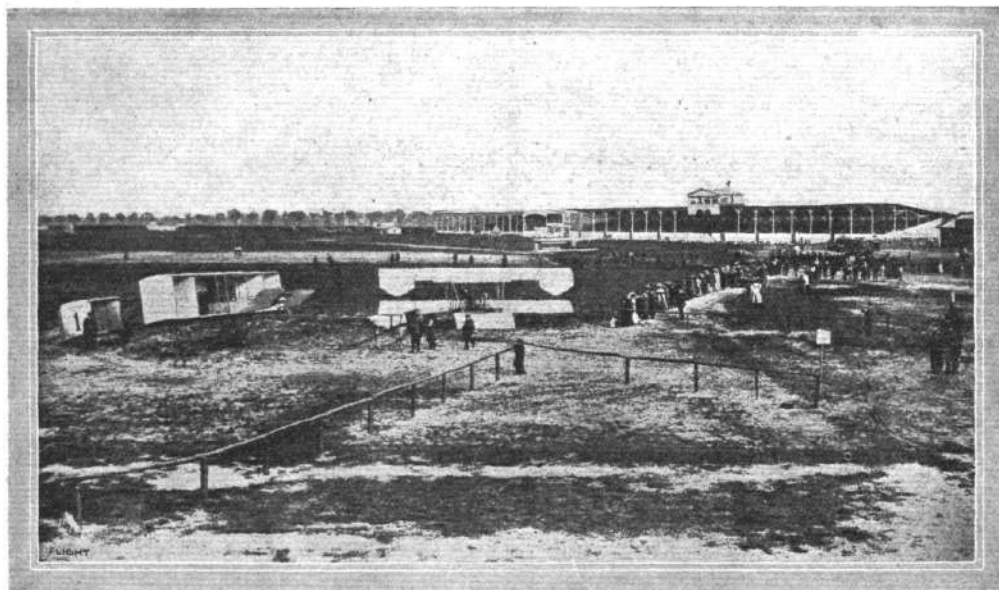
How the Prize Money was Distributed.

Jeannin	24,800 marks.	Swendsen	1,000 marks.
De Caters	15,000 "	Thilen	500 "
Frey	5,500 "	V. Gorrissen	500 "
Engelhardt	4,000 "	Total	51,300 "

Entries for Budapest Meeting.

No doubt the fact that the organisers of the flying meeting at Budapest are offering £24,000 in prize money, the largest amount ever put up at a flying meeting, accounts for the fine entry list secured. From the following official list it will be seen that twenty-eight aviators have entered, and several of them have machines of various types.

M. Amerigo (1 Sommer, 1 Farman)	Herr Moser (Hanriot).
M. Bialovuci (Sanchez-Besa).	M. Paulhan (Farman).
M. Chavez (Farman).	M. Paul (Voisin).
M. Duray (H. Farman).	M. Pequet (Sanchez-Besa).
M. Efimoff (Farman and Voisin).	Baronne de la Roche (Voisin).
Capt. Engelhardt (Wright).	M. Kougier (Voisin).
Herr Etlich (Etlich).	M. Pischoff (Pischoff).
M. Frey (Sommer).	Herr Steinbeck (Grade).
M. Guillemin (Wright & Farman).	Herr Wagner (Hanriot).
Herr Illner (Etlich).	M. A. A. Warchalowski (own machine).
M. Quellerot (Farman).	M. K. Warchalowski (Farman and other machines).
M. Kinet (Farman).	M. Wienziers (Antoinette).
M. Krastel (Blériot).	Herr Schindler (own machine).
M. Latham (Antoinette).	
M. Leblanc (Blériot).	



General view of the Stands and Starting Place on the Johannisthal Aerodrome near Berlin.—The machines in the foreground are Baron de Caters' Voisin (No. 1) and Herr Jeannin's Henry Farman.

THE FIRST CHANNEL CROSSING.

DR. JEFFRIES' OWN NARRATIVE.

THE first aeronauts to cross the Channel were, as our readers know, Dr. Jeffries and M. Blanchard, who travelled from Dover into the forest of Guines on January 7th, 1785. The account of that aerial voyage, which was the second undertaken by Dr. Jeffries, is to be found in a pamphlet written by Dr. Jeffries himself, a copy of which can be obtained, by anyone anxious to add this interesting old work to his library, from Messrs. Wm. Wesley and Sons, who have kindly sent the book to us for inspection.

The narrative is written in that quaint old-world style, wherein the author takes the reader completely into his confidence. It begins with a statement of how Dr. Jeffries undertook to defray the expenses if M. Blanchard would act as pilot. From December 17th to January 7th, when the trip took place, the two enthusiasts were stolidly waiting for a favourable day, and in the interim it seems that there were not wanting busybodies who tried to use more than mere verbal persuasion against what they considered to be a foolhardy undertaking.

Ballasting the Pilot.

Poor Dr. Jeffries had a rather unpleasant time of it, as may be judged from one of the footnotes, which begins as follows:—

"After various artifices (one of which was secretly to increase the weight of M. Blanchard by loading him with a concealed heavy girdle) had been clandestinely attempted to deceive, deter, and prevent me from this enterprise, and to prejudice the minds of some of the principal gentlemen of the county of Kent, and of the city of Dover, insinuating that, from the incapacity of the balloon, it was madness to attempt the experiment with two persons, unless the balloon could carry a hundred pounds weight of ballast."

All things considered, the aeronautical world owes a good deal to Dr. Jeffries, for apart from being subjected to all this inconvenience, and many quite unmerited and totally incomprehensible insults as well, he actually undertook the trip after binding himself by an agreement with Blanchard, "that in case of necessity on our passage, I would get out of the car for his preservation." A man who will do this, it may be fairly said, is no coward, and yet such is the prejudice against new ideas, that Dr. Jeffries actually had to go to the Governor of Dover Castle before he could get that assistance, and it may almost be said protection, which by that time was becoming necessary.

The Start.

The morning on which the trip was made was fine but intensely cold, and the wind about north-northwest. Scudding clouds overhead, however, were travelling in the direction of France, as also was the smoke from Dover Castle, and after one or two tests with kites and a Montgolfier fire balloon, it was decided that the day was favourable. "The balloon being filled a little before one o'clock, we suffered it to rise, so as to be disengaged from the apparatus, &c., for filling it, and to be drawn down again just at the edge of the cliff, where we attached the wings or oars, with the moulinet and gouvernille, to the car. And exactly at one o'clock (having in the car with us three sacks of sand ballast of 10 lbs. each . . .) we rose slowly and majestically from the cliff." Dr. Jeffries, ever patient and forgiving, in referring to the spectators who came to see him off, states that

the cliff was covered with a "beautiful assembly." Referring to the apparatus on board the car, Dr. Jeffries says that he did not take any other "philosophical instrument" except a barometer and a mariner's compass. When the ascent was made the neck of the balloon was not untied at once, as it is in modern practice, and Dr. Jeffries makes quite a point of the fact that this vent was only opened when the balloon became distended to its utmost. He considered it a very cute way of avoiding unnecessary loss of gas by opening the valve, as may be gathered from the following remarks:—"We also had the further satisfaction to observe that by this method no more of the gas or inflammable air would escape than was absolutely necessary to relieve the balloon and to prevent it from bursting."

The First Ballast.

Halfway across the Channel they had to cast out a sack and a half of ballast to check descent, and a little later on they had to cast out the other $1\frac{1}{2}$ sacks and also a bundle of pamphlets. Still more pamphlets had to be jettisoned at a quarter past two in the afternoon, when "we had not now anything left to cast away as ballast in future, excepting the wings, apparatus, and ornaments of the car, with our clothes and a few little articles; but as a counterpart to such a situation, we here had a most enchanting and alluring view of the French coast, from Blackness and Cape Blanez to Calais." Surely Dr. Jeffries was an artist as well as a sportsman.

Still the balloon descended, and it became the turn of the "little articles and ornaments" to go overboard. One of these was a bottle, about which Dr. Jeffries relates the following curious incident. "After which, we cast away the only bottle we had taken with us, which, in its descent, appeared to force out a considerable steam, like smoke, with a hissing or rushing noise; and when it struck the water, we very sensibly (the instant before we heard the sound) felt the force of the shock on our car; it appearing to have fallen directly perpendicular to us, although we had passed a considerable way during its descent."

The Last Ballast.

Even thus the natural laws of gravitation were not appeased, and after casting away everything they could lay their hands on, "we began to strip ourselves, and cast away our clothing, M. Blanchard first throwing away his extra coat with his surtout; after which his other coat and trousers; we then put on and adjusted our cork jackets, and prepared for the event." Happily for them, the "event," as Dr. Jeffries terms it, never took place, for just at the last moment the balloon ascended once more, and carried them over the French coast, and finally landed them in the forest of Guines, in Artois.

The Laurels—A Comparison.

Here the two aeronauts met with a very warm reception, and Blanchard was not only presented by the French Government with "a present of 12,000 livres, with a pension annexed of 1,200 livres per year," but "as a perpetual memorial of this event, the place where we descended to be called in future the Canton of Blanchard."

Dr. Jeffries himself received nothing—thus do we encourage our pioneers.

The same book contains a still more extensive account of Dr. Jeffries' first journey, also with M. Blanchard.

FOREIGN AVIATION AND AIRSHIP NEWS.



MR. H. H. PIFFARD'S ALL-BRITISH BIPLANE ON THE SHOREHAM FLYING GROUND.—Driven by an 8-cyl. 40-h.p. E.N.V. engine and 7-ft. propeller, the span is 31 ft. The Shoreham grounds are controlled by Aviators' Finance, Ltd.

Maurice Farman Visits his Brother Henry.

ON the occasion of the opening ceremony at the new Henry Farman aerodrome at Beauce on Saturday last, Mr. Maurice Farman decided to visit his brother by aeroplane, and not only so, but to take a friend with him. Rising from his aerodrome at Buc, with his companion M. Tabuteau by his side, Mr. M. Farman flew over Rambouillet, Ablis, Anthon and Merobert to Etampes, landing on his brother's flying ground, the distance traversed being 80 kiloms.

Marcel Hanriot Flies over Rheims.

A SERIES of splendid flights were carried out on the 20th inst. by Marcel Hanriot, using a monoplane designed and built by his father, the one-time famous racing-car driver. He first flew over the country alone for fifteen minutes, and then carried a passenger for seven minutes, and after one or two similar trips he finished with an excursion from the Hanriot flying ground in the plains of Betheny

to the city of Rheims, flying there over the docks and station. He returned to the aerodrome along the railway line and landed in front of his shed. During this flight he was mostly at a height of between 100 and 120 metres.

Count Lambert in an Onion Field.

ACCOMPANIED by Lieut. Chevreau, a military pupil, Count Lambert started off from Vincennes on the 19th for an aerial trip, but they were suddenly overtaken by a storm. Forced to land at once, Count Lambert brought his Wright machine safely to earth in an onion field in the outskirts of the town, from where it was rescued later in the day by a motor lorry.

M. Nau has a Smash.

WHILE experimenting at Juvisy on the 18th inst. with the monoplane which he has designed and built himself, M. Robert Nau was seriously injured. He was flying at a height of about 10 metres when something went wrong, and the machine suddenly shot down to the ground. M. Nau was thrown out and picked up unconscious, and was found to have sustained severe contusions on his head and all over his body. He is, however, recovering very rapidly, and already has given orders for the repairs to his machine.

Mark-Posts for Flying Contests.

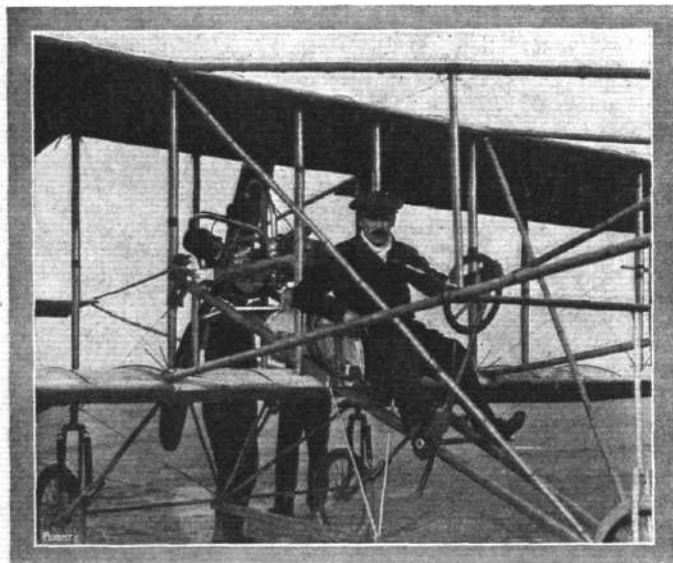
FOLLOWING on the accident to M. Hauvette Michelin, the Ligue Nationale are arranging to lay before the International Federation a proposal to substitute discs or large white rings on the ground of the aerodrome in place of the usual mark-posts, which are said to be dangerous in view of the possibility of collision.

Osmont at Bucharest.

ON Saturday, Osmont made several good flights on his Henry Farman machine at Bucharest, and carried several passengers, including Mme. Jean Camarashesco, daughter of the French Minister, and the Prince of Schenberg-Hartenstein, the Austro-Hungarian Minister to Roumania. The following Tuesday Osmont took Prince Carol of Roumania for a trip over the country, starting from and returning to the Cotroceni Camp.

Souvenirs of St. Petersburg Meeting.

ALL the aviators who took part in the St. Petersburg meeting, including MM. Christiaens, Morane, Popoff, Edmond and Wienziens and Mme. de la Roche, have been decorated with the Imperial Order of St. Anne, while each one has also received either a pin, watch, or cigarette case with the Imperial crown set in brilliants.



Mr. C. C. Paterson in the pilot's seat of his British-built biplane, on which he made some short flights at Liverpool recently, as recorded in **FLIGHT** last week. (See also p. 407.)



M. BLÉRIOT'S LATEST MONOPLANE.—M. Blériot has now evolved a new model monoplane which bears the designation "No. 13." It differs from the Cross-Channel type in having a long and wide tail shaped like that of a bird, and ending in two hinged flaps.

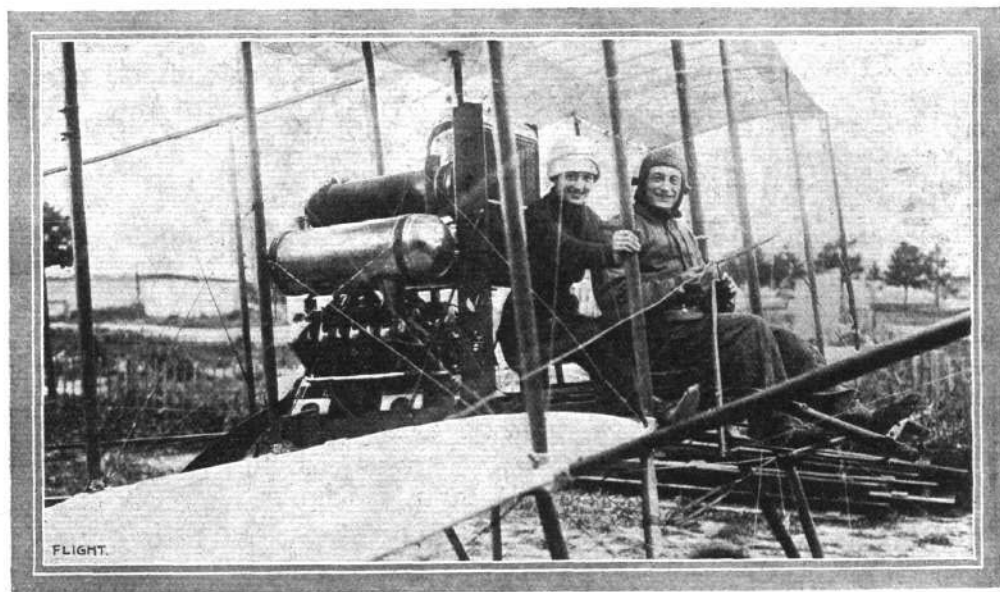
Doings at Mourmelon.

The Farman School.—One of the outstanding performances on the 18th inst. was that of Martinet, who rose to a height of 300 metres and flew for half an hour over the country, then ending his trip by planing to the ground. Lieut. Cammarola, a new pupil at the military school, flew round the ground several times at his first attempt. We have referred elsewhere to the visit of General Brun on the following day, but after the military officers had left Lebedeff flew for half an hour. Friday of last week was a busy day, and several extraordinary flights were made. Martinet, competing for a "Débutant's" prize, covered ten circuits, amounting to 31 kiloms., in 28 mins. 10 secs., while Lindpaintner flew for half an hour at a height of 200 metres. Later in the day Martinet was out for an hour in spite of a very violent wind. Two of the military pupils also put in good work, Capt. Marconnet flying for an hour and a half, while Lieut. Fequant was aloft for 1 hr. 45 mins. Last Saturday Didier, in a trial run with Lieut. Savoya's machine, covered 30 kiloms. in 31 mins., Capt. Madiot made a cross-country trip at a height of 400 metres, and Martinet flew for about half an hour at the same altitude. Lindpaintner also

was out for 40 minutes, and Henry Farman took several passengers, including Mme. Franck, for short trips. On Sunday Tetard made a flight lasting 25 mins. with a passenger, and Martinet flew for 45 mins. Lindpaintner on Monday was flying across country towards Rheims, and covered about 40 kiloms., while N. Kinet, having received his new machine, flew on it with his wife for 20 kiloms.

The Antoinette School.—On the 15th instant, Labouchère successfully carried out the qualifying flights for the Ae.C.F. pilot's certificate, and the next day he took up his duties as an instructor. During the morning he made thirty-four circuits of the flying-ground, and during the afternoon twenty, accompanied by various pupils. Three students made a very successful début on the 20th. René Thomas, the well-known driver of racing motor cycles and voiturettes, flew for 10 minutes, as also did Gobe, while A. Lafont was up for 12 minutes, during which he passed over a wood and the Buoy road. Last Saturday Wachter gave three lessons to pupils, which lasted 20 minutes each.

The Voisin School.—Colliex, who was one of the pioneers in aviation, and has been in charge of the Voisin School for some time, easily made the necessary flights last week to obtain his official



Cheuret, with Mme. Branger as passenger, on a Henry Farman biplane, Thursday, May 19th, when a new cross-country passenger record was put up between Mourmelon and Chalons Cathedral and back.

Ae.C.F. certificate as a *pilote-aviateur*. A new lady pupil, Mdle. Rose Ithier, made several very good short trials on the 18th. During General Brun's visit to the camp on the 19th inst., Ernest Paul brought out his new type Voisin, with ailerons, and flew for 50 kiloms. at a height of 40 metres. He applied for an Ae.C.F. pilot certificate, and made one of the necessary tests in a high wind on the 20th, and successfully completed the examination on the following day, when he also flew for half an hour over the surrounding country. On Sunday last Ernest Paul won for his instructor, M. Colliex, the third of the "Professor" prizes, by three times completing a course of 1 kilom. in the form of a figure "8."

Other Doings.—During last week Weiss made several short flights on the Koechlin machine, as also did Mme. Niel and M. Saint-Didier. Last Saturday Duval was out on the Saulnier monoplane, and experimented with it with good results for some time, after which operations were suspended owing to one of the wheels buckling during a sudden landing. At the Blériot school, Dufour was flying over the country round Mourmelon on the 18th inst., and Ehrmann and Mdle. Jane Herveu also made short trips.

Flying at Issy.

ONCE more the flying ground is resuming an animated appearance. On the 19th, Leblanc had the new Blériot out, and covered three circuits of the ground at a height of 20 metres. The same day, Duclos, Thorns and Molleuf were practising on Blériots, Maurice Clement and Audemar were trying their Demoiselles, Anzani was testing his biplane, Lieut. Bier was testing the Montgolfier monoplane preparatory to sending it to Budapest, and André Frey was flying on his Sommer biplane. These same flyers were out on the next day, and were added to by Temain who was flying at Wembley Park some time ago on a Blériot, and Bunau-Varilla on a racing Voisin. On Saturday, Anzani was trying a Saulnier monoplane, which is fitted with a 50-h.p. Anzani engine; Vitzig was testing a monoplane with two propellers, Contenet was out on the Vendome monoplane, while Sasles was instructing two pupils in the use of the Zenith aeroplane.

Practice at Juvisy.

LADOUNGNE has continued to get good results from his Goupy machine, and on the 17th flew for half-an-hour, during which he reached a height of 200 metres. Two days later, while practising, he met with a mishap. Owing to the petrol pipe breaking the Gnome motor was suddenly stopped, and in consequence the machine was pitched forward, but no great damage was sustained. On the 18th Dommede made four rounds of the ground on his Unni-Canton machine, while the next day Campbell on his Voisin, with E.N.V. engine, completed ten laps of the course, and Gentil, also on a Voisin, made a similar performance. Capt. Ito and Capt. Takoosaka, of the Chinese Mission, visited Juvisy on the 20th, and witnessed Dufour and Campbell flying on their Voisin machines. On Saturday last these two flyers again made some good trials, as well as Dommede.

French War Minister Flying.

GENERAL BRUN, the French Minister of War, is determined to know as much as he can about flying, and has been studying the subject pretty seriously of late. On the 19th inst., accompanied by General Rocques, Commander of the Engineers, General Remy, Commander of Artillery, General Goiran, General Dartein, and General Mourret, he visited Chalons Camp and thoroughly inspected the military flying school there, and also went over the Henry Farman and other works. Lieut. Fequant made several flights round the camp, and then took General Brun for a short trip on his Henry Farman machine, while Lieut. Cammerman took General Rocques and several other officers up. Later General Brun visited

the Antoinette school, when he was taken for a trip lasting a quarter of an hour, three circuits of the camp being traversed at a good height, by Wachter, the Antoinette instructor. Altogether General Brun was much impressed by all he saw, and spoke of the great value of aeroplanes for reconnoitring purposes.

Flying from Chalons to Paris.

CONSIDERING his short apprenticeship, M. Martinet accomplished a remarkable feat on Monday in flying from the flying ground at Chalons Camp to the outskirts of Paris. Some days ago M. Martinet entered for the Anjou meeting, and was asked to go to Paris in order to sign the contract. He determined to fly there on his Henry Farman biplane, and although he did not succeed in reaching his goal at Issy, he got within twenty miles of the French capital. Starting at about four o'clock in the morning, he rose to a good height, and went off at a great speed in the direction of Montmiral. On arrival there he lost his way over the cross-roads, but kept straight on, remembering Mr. Farman's injunction to keep the sun at his back. Near Rebais the huge forest was safely crossed, but soon after a dense fog enveloped everything. Martinet rose to a height of 500 metres, hoping to get clear and perhaps catch sight of the Eiffel Tower. In this, however, he did not succeed, and so determined to land at the first convenient point, which proved to be on a side road at Neufmoutiers, near Tournan. The distance flown was 92½ miles, just under 150 kiloms., which was traversed in 1 hr. 28 mins., a speed of over 60 miles an hour.

Cross-Country Passenger Record Beaten.

ON the 19th inst. Cheuret on his Henry Farman biplane succeeded in beating the cross-country record for a flight with a passenger. Accompanied by Mme. Branger he started from Mourmelon and flew round the church at Chalons and then back to the camp, afterwards continuing the trip over the surrounding country until 1 hr. 12 mins. had elapsed. He was timed by officers of the military school to cover the 44 kiloms. from Mourmelon to Chalons and back in 34 mins. at a speed of 75 kiloms. an hour. This Farman machine is fitted with an E.N.V. motor.

Aeroplane versus Car.

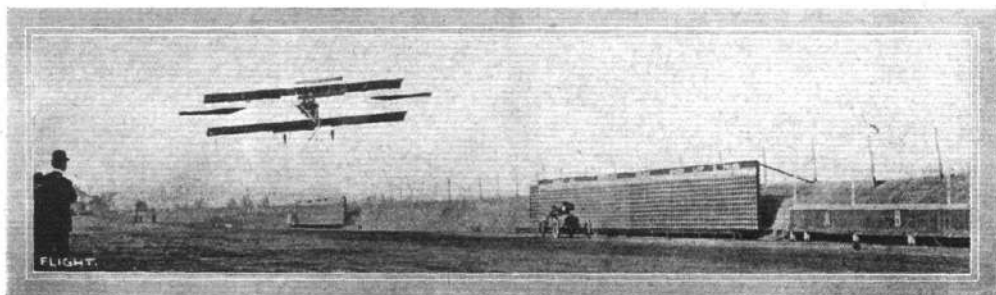
DURING the three days' motor race meeting on the Atlanta (Ga., U.S.A.) Speedway held on May 5th, 6th and 7th, some diversion to the ordinary car racing was provided in the form of some exhibition flights by Mr. Charles K. Hamilton with his biplane. What purports to be the first flyer *versus* automobile race took place on one of the days when Hamilton raced Kjelson, on an S.P.O. car, for 4 miles, or twice around the track. The airman kept close to the ground and not more than a few feet separated car and flyer any part of the distance. The aeroplane won in the final stretch by a few feet, the time for the 4 miles being 5 mins. 6 secs. Previously Hamilton had made one circuit (2 miles) in 2 mins. 38½ secs.

A New American Association.

ON Monday night, at a meeting held in New York, it was decided to found a new body to be known as the American Aeronautic Association, to which the aero clubs of Indianapolis, St. Louis, Baltimore, Harvard, Illinois, Washington and Buffalo will affiliate. It is announced that this new organisation has been started because it is felt by a number of people that the American Aero Club is controlled by the Wright Brothers.

The Verona Meeting.

THE opening day of the Verona meeting was spoilt by heavy rain, and so no lengthy flying was done. Paulhan, Chavez, Duray and Efimoff on Henry Farman machines, and Molon and Cattaneo on Blériots, all made several circuits of the course, but the longest flight did not exceed ten minutes in duration.



C. K. Hamilton on his biplane, racing Kjelson on an S.P.O. car at Atlanta Speedway (U.S.A.).

Clouth Dirigible Out Again.

ANOTHER trial lasting about four hours was undergone by the Clouth airship on the 19th inst. Leaving its shed at Cologne at four o'clock, Capt. Kleist, who was in command, navigated the vessel to the neighbourhood of Bonn and after two hours landed at Urfeild. After a stop of half an hour the airship returned to Cologne where several manoeuvres were carried out over the city, the vessel rising to a height of 700 metres. It returned to its shed quite safely at 8 o'clock.

Airship Garage as Memorial.

It has been decided that the memorial which, at the German Emperor's wish, is to be erected at Homburg, to commemorate the first parade of the aerial fleet on April 23rd last, will take the form of an airship hall. In view of what happened to that aerial fleet after the review, there would seem to be a certain amount of irony in this proposal.

A New Parseval.

FROM Berlin it is reported that the German War Office has ordered a new Parseval airship from the makers of that type of vessel. It will be of slightly smaller capacity—5,700 cubic metres—than the latest Parseval, but it is to be considerably faster. It is to be delivered in the autumn.

Military Airships for Italy.

THE Italian Government have voted 10,000,000 lire (£400,000) towards the cost of creating a fleet of dirigible balloons which is to be completed within the next five years. Provision has been made for the erection of adequate works and barracks at Bracciano and Rome, as well as proper sheds at Rome, Venice, and Verona. There are now in course of construction three vessels of 4,200 cubic metres capacity, as well as a cruiser of 8,000 cubic metres capacity which is to be completed in 1911.

Ae.C.F. Balloon Grand Prix.

It has been decided to start the long-distance balloon race for the Grand Prix of the Aero Club of France on June 26th, when it is anticipated that at least twenty competing balloons will go up at St. Cloud.

An Aerial Torpedo Craft.

AT the end of last week some experiments were carried out on the Tempelhof parade ground, near Berlin, by an aviator named Graet, with a machine intended for military use. It is described as a combination of monoplane and biplane, and is intended to carry four men. A motor of 50-h.p. is fitted which it is intended should give the machine a speed of 75 miles an hour. When the apparatus is not being used as a flying machine, the planes can be taken off and it will then be available as an ordinary motor car.

Assistance to Aviators, &c.

OWING to the growth of their business, Messrs. Markham and Prance, the well-known consulting motor engineers, of 143, Strand, have found it necessary to move into more commodious offices, their new address being Dudley House, Southampton Street, Strand, W.C. Their telegraphic address remains as before, "Motoneers, London," whilst the new telephone number at Dudley House is City 4065.

A Simms Distributor.

THOSE who appreciate the qualities of the Simms magneto, and happen to be on the lookout for a new distributor, may feel inclined to experiment with one just introduced by the Simms Magneto Co., Ltd., Welbeck Works, Kilburn, N.W. The makers say that it is both reliable and efficient, free from the drawbacks of high-tension distributors, and claim other advantages which are detailed in an illustrated descriptive leaflet, which they will be pleased to send to any inquirer. The distributor is fixed to the motor by means of a bracket, and can be used either with magnetos or batteries.

Aeroplanes at Shepherd's Bush.

WE understand from the Aeroplane Supply Co. that they have taken a large stand at the Anglo-Japanese Exhibition at Shepherd's Bush, and they will there show a different all-British machine every fortnight. The first machine to be staged will be a Lane monoplane, while a British-built Farman biplane will be seen as soon as it is completed.

CORRESPONDENCE.

* * The name and address of the writer (not necessarily for publication) MUST in all cases accompany letters intended for insertion, or containing queries.

Correspondents asking questions relating to articles which they have read in **FLIGHT**, would much facilitate our work of reference by giving the number of the letter.

NOTE.—Owing to the great mass of valuable and interesting correspondence which we receive, immediate publication is impossible, but each letter will appear practically in sequence and at the earliest possible moment.

THE DE HAVILLAND FLIGHT ENGINE.

[528] With reference to the article in **FLIGHT** re the above, I notice that the power of the engine is given as 40-45-h.p. at 1,500 r.p.m. Since the article was written, however, the usual adjustments required in a new engine have been made, with the result that 52-h.p. is developed at 1,500 revs. continuously, and 40-h.p. at 1,050. The weight is 200 lbs. in running order, but without fly-wheel, the latter weighing 30 lbs.

G. DE HAVILLAND.

SKIDS ON SAND.

[529] I have read in **FLIGHT**, with great interest, the account of the Macfie monoplane, but there is one point which I cannot quite understand, and should be glad if it could be explained to me.

Why is a skid used to support the tail of the machine in preference to a wheel?

Though the wheel may be heavier, would it not make up for this by smoother running, or, in the case of the engine stopping and the machine falling to the ground, would not a wheel be quicker to act, and so ward off part of the shock by revolving immediately it came in contact with the ground? for a monoplane generally settles down right side up, and does not come down head first, as is sometimes the case with a biplane.

I am very interested in Mr. Macfie's aeroplane, and wish him every success.

Fleetwood.

FRED WOODS.

[A skid was used to support the tail of the Macfie monoplane because the experiments were conducted over sand, and it was considered would act better than a wheel when landing on sand. It is interesting in this connection to remark upon the experiments that are being carried out on the sands at Camber with a Wright biplane by A. Ogilvie, who has found the skids of this machine to be particularly suited for landing on sand. On several instances when a forced descent has been made broadside on to the wind, these skids have slipped over the sands sideways, and thus materially contributed to a safe landing. The skids of this particular machine have been metal shod to prevent the undue wearing away of the timber.—Ed.]

WIND EFFECT.

[530] With regard to the effect of wind on flight speeds, I have pleasure in sending you a table that I found in a German book ("Flugapparate," by F. Rost).

Wind and Wind Pressure.

Speed of Pressure.		Speed of Pressure.		Speed of Pressure.	
wind in	Kilog.	wind in	Kilog.	wind in	Kilog.
metres	per sq.	metres	per sq.	metres	per sq.
per sec.	metre.	per sec.	metre.	per sec.	metre.
1 ...	0.135	9 ...	10.97	30 ...	122.20
2 ...	0.540	12 ...	19.5	36 ...	171.81
6 ...	4.870	15 ...	30.47	45 ...	277.8
7 ...	6.460	20 ...	54.16		

The figures given in this table differ greatly from those of Louis Toft, on which they are a great improvement. Of course, the surface of the aeroplane has much to do with the result.

Offenbach, Germany.

R. HURST.

MONOPLANE V. MULTIPLANE.

[531] In your issue of January 15th, p. 39, Vol. II, Mr. Roe states, in his article on "Monoplane v. Multiplane," that his accident was caused by the sudden turn, and that in a monoplane, with its larger span, the overbalancing effect would be greater. Surely the counteracting effect would also be greater, owing to the greater leverage, as the ailerons or warping would be farther away from the centre than in the triplane?

Could any of your readers tell me what is the wood used in the Finbat monoplanes? I found it bent easily without heat.

St. Peters.

J. ALCOCK.

OUR INSULAR POSITION.

[532] It was to be expected that M. Blériot's successful Channel flight would raise a chorus of lamentations from the Jeremiahs of the daily Press, to be repeated now it has been crossed a second time, that our insularity was gone—that England was no longer an island, that our fleet would soon be as useless as scrap-iron, and much more in the same strain. Does it not occur to these imaginative writers that exactly the same prophecies might have been made thousands of years ago when the first vessel built by man crossed the Channel? One can imagine the press-man of that day, writing in the morning paper of the period: "Our insularity is gone! The Channel which separates us from the Continent has been crossed successfully by a machine which the ingenuity of man has invented!" And yet we seem to have done very well during all the centuries that have elapsed since.

The whole fallacy rests on the popular misconception of the character of our insular position. The Channel protects us from invasion, because an army cannot march across it to reach this country. It will fulfil that function to the end of time, so long as man's physical attributes remain what they are. Prophecy is a dangerous thing, particularly when dealing with a new science, but one is fairly safe in maintaining that it will be always easier to send an army of 100,000 men with artillery, horses, ammunition and transport from the Continent to England by steamer than by aeroplane or dirigible. In other words the insularity of this country was threatened far more seriously when the first boat crossed from Calais to Dover, or their ancient equivalents, than when M. Blériot achieved his brilliant flight by aeroplane on Sunday, July 25th, 1909.

Co. Cork.

MILES.

A MODEL FARMAN BY A BOY OF 15.

[533] Miss Height, of the Clarendon Newsagency, has asked me to write and send you a photo of myself and the model Farman biplane, which she has had in her window as an advertisement for your valuable paper, FLIGHT.

I have never seen a full-sized aeroplane, and the whole of my model was built from the instructions given by you.

Miss Height asked me to tell you that her exhibition has been the means of putting on a great many more customers for FLIGHT.

I shall be pleased to help other readers of FLIGHT who are making a Farman biplane of about the same size as mine ($\frac{1}{16}$).

I shall be fifteen in September.

Grange House, 64, Clarendon Avenue,
Leamington Spa.

J. F. MILLER.

AEROPLANE AS A GLIDER.

[534] Let me ask you through the medium of your valuable paper this question. That if the engine of an aeroplane were to stop through lack of petrol, and the machine itself were undamaged, how would it descend?

Sparkbrook.

H. MOLES.

[An aeroplane is potentially a glider, and should behave as such if the engine is stopped in mid-air. There is no difference in principle between gliding and flying, except that the flight path of a glide slopes towards the earth, whereas the flight path of a flight may be in any direction, according to the power available from the engine. The same skill will be demanded of the pilot during gliding flight as during mechanically-propelled flight, for the machine will not be more stable under one condition than under the other. Many well-known pilots have stopped their engines in mid-air, and have glided to earth. If the engine stops unexpectedly it may possibly affect the equilibrium of the machine, and disconcert the pilot, but the effect produced under such circumstances is largely determined by the exact position of the centre of gravity in respect to the centre of resistance, and, therefore, depends upon design.—Ed.]

TRACTOR SCREWS AND BLÉRIOT MACHINES.

[535] I should be very much obliged if you would answer me the following questions:—

(i) What are the main differences in curvature or otherwise (if any) between a propeller and a tractor screw?

(ii) Would it be possible to convert a propeller into a tractor screw? If so, how?

(iii) Could you tell me where I can obtain a tractor screw about 6 or 8 ins. in diameter?

(iv) In the Blériot monoplane (CC type) what is the height from the ground to the front end of the main plane? and also

(v) What is the height from the ground to the rear end of the tail?

Ramsgate.

V. LINDSAY THOMPSON.

[(i, ii) The difference between a propeller and a tractor screw is merely one of position, a propeller being situated behind, whereas a tractor screw is placed in front. The dimensions and shape are not affected by position so far as the theory of the design is concerned.]

(iii) Several of the firms advertising in FLIGHT will be able to supply you with a tractor screw of the size you require.

(iv, v) The dimensions you require in respect to the Blériot cross-Channel monoplane can be obtained approximately by scaling from our full-page drawing.—Ed.]

FLOATS FOR AEROPLANES.

[536] Do you know anyone who has experimented with floats or canoes attached to their aeroplanes for practice over water? Would it be possible to get up enough speed on water to rise? I know the Voisin glider rose in a strong wind off the water, but it also came down and dived under the surface when it was being towed by a motor boat.

LILIAN E. BLAND.

[Santos Dumont proposed to use floats on one of his very early machines. Wilbur Wright fitted them as a precaution to his machine during his flights in connection with the Hudson-Fulton



Master J. F. Miller with his model Farman outside Miss Height's shop, and on the right the model is seen upon a larger scale in the hands of its constructor.

celebration on Governor's Island, New York, and Mr. Jack Humphreys used a boat-shaped hull on his first machine with a view to starting on water.

The following note (N. 126) appears in "Flight Manual":—"The use of a lake is sometimes contemplated as an aerodrome, the flyer being fitted with suitable floats instead of either wheels or runners. It must be borne in mind, however, that the speeds which obtain in flight are for the most part in excess of those which have yet been achieved on water."—Ed.]

SINGLE-SURFACED PLANES.

[537] With regard to single-surfaced planes (490), with the exception of the Curtiss machine the ribs are screwed to the top side of the front main spar and the under side of the rear spar, leaving the under side smooth. The Curtiss has the ribs on the top of both spars, which does not leave a smooth under surface.

Belfast.

LILIAN E. BLAND.

LOADING OF GLIDERS.

[538] The following might interest W. Smith (487) with regard to weight carried per sq. ft. in gliders:—

lbs. per sq. ft.

Pilcher glider	...	7
Montgomery glider	...	10.8
Lilienthal biplane glider	...	11.8
Wright gliders	...	12 and 13
Lilienthal monoplane glider	...	21
The Mayfly	...	20 in winds of 20 m.p.h.

A well-designed biplane glider should certainly lift 15 lbs. per sq. ft. in a steady breeze of 15 m.p.h., but, of course, the lift depends on the proper plane camber, which should be about 3 ins. for a chord of 5 ft. about 20 inches from the leading edge, or less, and in my machine the main spars have a negative and positive angle.

LILIAN E. BLAND.

AUTOMATIC ADJUSTMENTS.

[539] I would suggest the following plan for keeping flying machines at a fixed altitude. I would place a light fan so that it would revolve parallel to the earth in the centre of a short vertical tube, funnel shaped at each end. This fan would depend on currents of air blowing up or down the funnel-shaped tube to revolve it. Now, any downward movement on the part of the machine would cause an upward current in the tube and revolve the fan, which, through the gear, would adjust the elevator to a greater lifting angle, thus counteracting the downward movement of the machine, and any upward movement on the part of the machine would cause a downward current in the tube, and revolve the fan in the opposite direction, thereby adjusting the elevator to a lesser lifting angle. I would have the machine kept in a straight course by a similar fan, suitably placed, working the rudder. The fan in this case would be placed so that a movement of the machine from right to left would revolve the fan one way, and any movement of the machine from left to right would revolve the fan the reverse way. The short funnel tube in this case would be placed parallel to the earth, and across the aeroplane I would have a shield placed so that it would revolve round and cover either end of the tube, to protect it from the wind, as it is necessary that the fan should not revolve in proportion to the velocity of the wind, tending to drive the machine out of its true course, but in proportion to drift of machine to either side. I hope your readers will understand the above description. Space will not permit me to go into details of the plan.

Dublin.

JAMES J. McGRATH.

[It seems to us quite impossible that the system advocated in the above letter would be likely to answer in practice, firstly, on account of the difficulty of eliminating the effect of aerial disturbances in the tubes, caused by air passing across the orifice, and, secondly, owing to the time lag that would be introduced by the inertia of the mechanism.—Ed.]

ARCHED WINGS.

[540] Re Mr. F. C. Harrop's letter (No. 460) in FLIGHT of April 16th, I am very pleased to find that he has apparently arrived at the same type of wing as I have. Some months ago I made a small glider with the dropping wing-tip, and found it almost unsatisfactory. The principle is the same as the turned-up wing-tip, but a very little thought as well as experiment will show its superiority over the latter type. The action is the same as the dipping front edge, and not only increases stability, but is almost totally unaffected by wind-gusts. The idea, as far as I can gather, is adopted on Capt. Sanders' biplane.

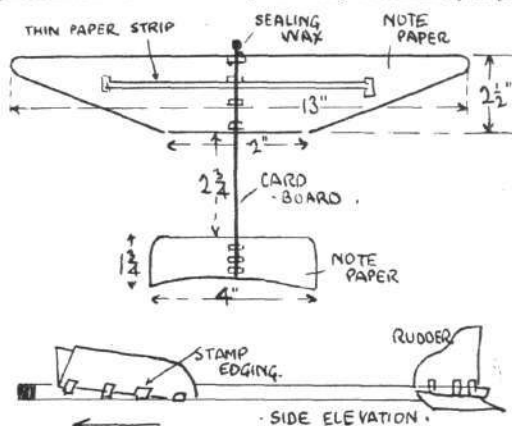
Hatfield.

J. MCC. CLIVE.

MODELS.

PAPER MODELS.

[541] I enclose herewith a sketch of a little paper model monoplane that I have found to be very satisfactory in use and very simple



to construct. Possibly it may be of interest to some of your readers who are fond of experimenting with such devices. The wings have a dihedral angle and pointed extremities.

Whitby.

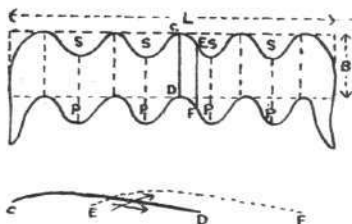
L. MELLOR.

SERRATED CUTTING EDGE.

[542] With reference to Mr. W. P. Dean's suggestion in March 5th (395), re serrated cutting edge, it seems to me that the advantages he maintains for it do not hold in a single case, except, perhaps, the flexibility.

The area of the plane is exactly the same as if it were plain rectangular $l \times b$, for the spaces, *ssss*, may be exactly filled by the protuberances, *pppp*. Consequently, area for area, the overall length is the same.

The actual cutting edge is much longer than the overall length,



and, as it occupies the same frontage, it cannot afford less resistance than a straight cutting edge.

Then, again, a complication may be introduced in this way: Let *cd* and *ef* be two adjacent sectional elevations (*see plan*). Now, the stream lines of the wind under the plane follow the curvature: therefore, there is bound to be friction between two streams of air travelling under adjacent strips of the plane.

Hoping for an elucidating explanation of these points from Mr. Dean.

Leeds.

A. WOODMANSEY.

BIPLANE V. MONOPLANE FOR MODELS.

[543] Much time and patience is being devoted to the construction of models by the industrious readers of FLIGHT, and I should advise them to try building a monoplane before launching forth on a biplane, as the former is so extremely simple to construct that anyone might build one. All that is necessary is to construct an A-shaped chassis, attach the wheels or ski, then fix the two planes and the body which carries the tail and elastic, and you have a good little flyer; but the biplane requires more patience and cash—though I prefer the latter.

I admire the plucky manner in which Miss Bland attacks the problems of flight, and the way in which she aids her contempo-

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varies through these pages, which I always make a point of reading first.

I should like to mention that I find a four-bladed propeller of smaller diameter and less pitch more efficient and advisable than a two-bladed propeller of larger diameter or greater pitch. Some may not agree with me, but this is my practical experience with various models.

Wishing FLIGHT endless success, and corroborating Signor Idel Perojo's views.
Hungerford. ————— G. H. BROWN-EKINS.

A PETROL-DRIVEN MODEL.

[544] I enclose two photos of an aeroplane that I have constructed and have been experimenting with for the last two years. It is fitted with a 4-cyl. petrol engine that I made for experimental purposes, and is, I believe, the smallest and lightest 4-cyl. petrol engine in the world. It weighs complete with carburetor and petrol tank 5½ lbs., and develops about 1½ h.p. at 1,300 r.p.m.

The propeller (which I made of black walnut, 7 layers) is in. dia. and 36 in. pitch (constant), thrust about 7 lb.; the aero-



plane complete is about 21 lbs. The above machine was exhibited at the Aero Exhibition at the Agricultural Hall two years ago, but the planes were somewhat modified, and is the only petrol-driven model that has ever flown.

I used a starting-rail at first, but now I have added wheels, and the machine rises off the ground when a speed of about 16 m.p.h. is attained. The engine is automatically stopped by a small clock-work arrangement. The covering was taken off the body of the machine to enable the engine to be photographed.

D. STANGER.

RUBBER MOTOR.

[545] I think it would interest those of your readers who are looking for a powerful rubber motor, that I had one constructed to my ideas by Messrs. Bonn and Co., of which I give the following details:—Length, 36 ins., giving a thrust of 15 ozs., and 18-in. propeller on 400 revs.; which it runs down in 30 secs. The rubber would stand another 100 revs.

I think this remarkable for so short a length of rubber.

Kennington Park Road. W. E. O. VETTER.

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22,379. L. WHITE. Aerial propulsion.

DIARY OF FORTHCOMING EVENTS.

British Events.

1910.
June 4 Kite and Glider Contests,
Kite and Model Aeroplane
Assoc.
June 25-July 2 Wolverhampton.
July 2 Balloon Race, Hurlingham.
July 11-17 Bournemouth.*

1910.
July 16 Kite and Models Competition, Kite and Model Aeroplane Assoc.
July 23 Balloon Race, Hurlingham.
July 28-Aug. 3 Southport.
Aug. 6-13 Lanark.*
Aug. 15-20 Aintree.

Foreign Events.

1910.	
May 20-30	Verona.
June 5-12	Vichy.
June 5-15	Budapest.
June 26-July 10	Rheims.*
July 24-Aug. 10	Belgium.
Aug. 25-Sept. 4	Deauville.

1910.
Sept. 8-18 Bordeaux.
Sept. 24-Oct. 3 Milan.
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